Photoelectrowetting

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In traditional electrowetting-on-dielectric devices droplets are moved about a substrate using electric fields produced by an array of discrete electrodes. I will show how a drop can be driven across a substrate with a localized light beam by exploiting the photoelectrowetting effect, a light-activated variant of electrowetting-on-dielectric. Droplet transport actuated by photoelectrowetting eliminates the need for electrode arrays and the complexities entailed in their fabrication and control, and offers a new approach for designing lab-on-a-chip applications. I present the physics of photoelectrowetting and our recent results with translation.

Note: Cookies will be served at 3:30